Index to Volume 17

How to Use This Index

This Index is of similar form to the Cumulative Index of this journal, published in November, 1939 and is composed of two main divisions: the Author Index and the Subject Index.

The Subject Index to Volume 17 of *The Journal of the Acoustical Society of America* lists the titles of all the papers, abstracts, and patents under twelve section headings as follows: 1, Acoustical Society of America; 2, Architectural Acoustics; 3, Books and Bibliographies; 4, Ear and Hearing; 5, Applied Acoustics; Instruments and Apparatus; 6, Musical Instruments and Music; 7, Noise; 8, Standards; 9, Speech and Singing; 10, Supersonics; 11, Waves and Vibrations; and 12, General, Unclassified. Each of these sections is further divided into a considerable number of decimally numbered subjects, which are listed below under the heading, "Classification of Subjects." Each subject is divided into four parts entitled Papers, Abstracts, Subtitles, and Patents. Under Papers will be found the original titles of all the papers appearing in the journal on that subject. Under Abstracts are listed the titles of the papers presented at meetings. Since a great amount of valuable material appears in the journal in papers whose titles cannot fully describe all the subjects which the papers cover, some subtitles of papers have been indexed under the heading Subtitles. When subtitles covering the material did not appear in the paper, they were written; the captions of some of the figures were also included under this heading. Thus, while the Subtitles portion of the index is informal, it is hoped that it will increase the probability of finding the desired information quickly. All patents appearing in the journal are listed under the heading Patents.

References on most subjects can be located immediately by a logical use of the Classification of Subjects below. In case the reference sought is of an unusual character such that there is uncertainty as to the subject under which it might have been classified, this can usually be found quite quickly by the process of eliminating the sections and subjects under which it is quite improbable that it might have been listed. In case of doubt, a title has often been listed under a number of subjects.

Obviously, the Author Index is more convenient than the Subject Index when one knows the name of the author of the paper in which he is interested.

The References to Contemporary Papers on Acoustics are identified in each issue by the same decimal numbers listed below, and may be consulted for references in other journals than our own. In Volume 17 these references will be found on pages 90, 155, 302, and 363.

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Bauer, B. B. Frequency response preference tests for record reproduction. **17**: 102(A)—1945

Beranek, L. L. Basic measurements on the physical characteristics of speech transmission systems. **17**: 101 (A)—1945

Bergmann, Peter C. Wave equation in a medium with a variable index of refraction. **17**: 329—1946

Bolt, Richard H. Influence of room proportions on normal frequency spacing. **17**: 101(A)—1945

Bordoni, Piero Giorgio. Addendum on conical sound source. **17**: 338—1946

—— Conical sound source. **17**: 123—1945

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Carhart, Raymond. Monitored live-voice as a test of auditory acuity. **17**: 339—1946

Carlisle, R. W. and H. W. Koren. Investigation of resonances in filaments by mechanical actuation and measurement of electromagnetically induced voltages. **17**: 71—1945

—— **and H. W. Koren.** Detection of resonances in vibratile members by measurement of electro-magnetically induced voltages. **17**: 101(A)—1945

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—— **and Peter Chrzanowski.** Absorption and scattering by sound absorbent cylinders. **17**: 315—1946

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—— Supersonic reflectoscope, an instrument for inspecting the interior of solid parts by means of sound waves. **17**: 287—1946

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Foldy, Leslie L. and Henry Primakoff. General proof of the reciprocity theorem for electroacoustic transducers. **17**: 102(A)—1945

—— **and Henry Primakoff.** General theory of passive linear electroacoustic transducers and the electroacoustic reciprocity theorem. I. **17**: 109—1945

French, N. R. and J. C. Steinberg. Factors governing the intelligibility of speech sounds. **17**: 103(A)—1945

Glover, Ralph P. Problem of frequency range in speech and music reproduction. **17**: 103(A)—1945

Gorton, W. S. Demountable soundproof rooms. **17**: 236—1946

Gwynn, M. H. Incremental coupled musical scales. **17**: 104(A)—1945

Haines, H. L. Aero-otitis media in submarine personnel. **17**: 104(A), 136—1945

Harris, Cyril M. Application of the wave theory of room acoustics to the measurement of acoustic impedance. **17**: 35—1945.

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Nixon, George M. "Higher fidelity" in sound transmission and reproduction. **17**: 102(A), 132—1945

Olson, Harry F. Gradient microphones. **17**: 192—1946
Osborne, M. F. M. and S. D. Hart. Transmission, reflection, and guiding of an exponential pulse by a steel plate in water. I. Theory. **17**: 1, 100(A)—1945

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Steinberg, J. C. (see French, N. R.) **17**: 103(A)—1945
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Urquhart, Noel. Musical scale of just intonation. **17**: 103(A)—1945

Wiener, Francis M. Absolute calibration of condenser microphones by the reciprocity method. **17**: 102(A)—1945
Wiggins, A. M. (see Ellithorn, H. E.) **17**: 104(A)—1945
Williams, A. O., Jr. Acoustic intensity distribution from a "piston" source. II. Concave piston. **17**: 219—1946
Williamson, Charles. Letter to the editor. **17**: 86—1945

Young, Robert W. Dependence of tuning of wind instruments on temperature. **17**: 187—1946
—— Review of acoustical patents. **17**: 92, 158—1945; 305, 365—1946

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Application of the wave theory of room acoustics to the measurement of acoustic impedance. Cyril M. Harris. **17**: 35—1945
Effect of position on the acoustical absorption by a patch of material in a room. Cyril M. Harris. **17**: 242—1946
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Small acoustical tube for measuring absorption of acoustical materials in auditoria. D. P. Loye and R. L. Morgan. **17**: 326—1946

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Measurement of acoustic impedance by the room transmission-characteristic method. Cyril M. Harris. **17**: 102—1945

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Application of the wave theory of room acoustics to the measurement of acoustic impedance. Cyril M. Harris. **17**: 35—1945

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Influence of room proportions on normal frequency spacing. Richard H. Bolt. **17**: 101—1945
Theory of the effect of wall irregularities on the distribution of sound in a room. P. M. Morse. **17**: 100—1945

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Method of acoustic measurement and apparatus therefor. **17**: 158—1945

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Acoustic transmission through a fluid lamina. I. Rudnick. **17**: 245—1946
Demountable soundproof rooms. W. S. Groton. **17**: 236—1946

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Inside the vacuum tube. F. A. Firestone. **17**: 363—1946
International congress of musicology. **17**: 89—1945

Introduction to theoretical seismology. J. B. Macelwane, S. J. and F. W. Sohon, S. J. Part I, Geodynamics. J. B. Macelwane, S. J. **17**: 155—1945
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Auditory acuity in severe aero-otitis media. J. Donald Harris. **17**: 104—1945
Sound conduction in the head and in the adjacent regions. Agusta Jellinek. **17**: 105—1945

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4.5 Instruments Relating to Hearing (see also 5.5)
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Tentative code for measurement of performance of hearing aids. Fred W. Kranz. **17**: 144—1945
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Clinical phenomena in conductive media: The individual earpiece. Mayer B. A. Schier. **17**: 105—1945
Headphone measurements and their interpretation. Daniel W. Martin and Leslie J. Anderson. **17**: 101—1945
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Group audiometry. J. Donald Harris. **17**: 73—1945
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Auditory acuity in severe aero-otitis media. J. Donald Harris. **17**: 104—1945

4.11 Theories of Hearing
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Relation between the theory of hearing and the interpretation of speech sounds. W. A. Munson. **17**: 103—1945

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Schlieren photography of sound waves. F. D. Carlson, K. C. Clark, and J. C. Eisenstein. **17**: 101—1945
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Acoustic stethoscope. **17**: 93—1945
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Measurement of acoustic impedance by the room transmission-characteristic method. Cyril M. Harris. **17**: 102—1945

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5.7 Frequency Standards. Frequency Measuring and Recording Instruments. Hearing Instruments (see also 4.5 and 5.5)
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Conical sound source. Piero Giorgio Bordoni. **17**: 123—1945

Erratum: addendum on conical sound source. Piero Giorgio Bordoni. **17**: 338—1946

General theory of passive linear electroacoustic transducers and the electroacoustic reciprocity theorem. I. Leslie L. Foldy and Henry Primakoff. **17**: 109—1945

Generalized plane wave horn theory. Vincent Salmon. **17**: 199—1946

High quality loudspeaker of small dimensions. Paul W. Klipsch. **17**: 254—1946

New family of horns. Vincent Salmon. **17**: 212—1946

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General proof of the reciprocity theorem for electroacoustic transducers. Leslie L. Foldy and Henry Primakoff. **17**: 102—1945

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General theory of passive linear electroacoustic transducers and the electroacoustic reciprocity theorem. I. Leslie L. Foldy and Henry Primakoff. **17**: 109—1945

Gradient microphones. Harry F. Olson. **17**: 192—1946

Investigation of resonances in filaments by mechanical actuation and measurement of electromagnetically induced voltages. R. W. Carlisle and H. W. Koren. **17**: 71—1945

Working standard for sound pressure measurements. Frank Massa. **17**: 29—1945

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Anti-noise characteristics of differential microphones. H. E. Ellithorn and A. M. Wiggins. **17**: 104—1945

Detection of resonances in vibratile members by measurement of electro-magnetically induced voltages. R. W. Carlisle and H. W. Koren. **17**: 101—1945

General proof of the reciprocity theorem for electroacoustic transducers. Leslie L. Foldy and Henry Primakoff. **17**: 102—1945

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5.10 Navigational Instruments. Depth and Altitude Measuring Instruments. Geophysical Prospecting. Underwater Sound. Submarine Detectors.

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Electric control system. **17**: 95—1945

Geophysical prospecting apparatus. **17**: 161—1945

Indicating device. **17**: 94—1945

Method and apparatus for recording seismic waves. **17**: 161—1945

5.13 Public Address Systems and Sound Picture Installation

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"Higher fidelity" in sound transmission and reproduction. George M. Nixon. **17**: 132—1945

ABSTRACT

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5.16 Sound Recording and Reproducing. Speech Instruments (see also 9.6). Supersonic Instruments (see also 10.3)

PAPERS

"Higher fidelity" in sound transmission and reproduction. George M. Nixon. **17**: 132—1945

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PATENTS

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Background noise suppressor. **17**: 162—1945
Balanced frequency modulation system. **17**: 97—1945
Connection means. **17**: 97—1945
Constant speed drive for magnetic recorders. **17**: 163—1945
Design for a phonograph needle. **17**: 95—1945
Electromechanical-conversion device. **17**: 97—1945
Lamp modulated recording method and system. **17**: 96—1945
Magnetic pole piece. **17**: 96—1945
Magnetic sound record. **17**: 369—1946
Mechanical-electrical sound reproducer. **17**: 96—1945; 369—1946
Method of and device for producing sound band matrices. **17**: 370—1946
Phonograph pick-up. **17**: 311—1946
Phonograph pick-up device. **17**: 371—1946
Phonograph record. **17**: 162—1945
Record reproducing system. **17**: 163—1945
Reproducer. **17**: 163—1945
Recorder. **17**: 311—1946
Signal translating apparatus. **17**: 369—1946
Signal translating device. **17**: 371—1946
Sound modifier. **17**: 369—1946
Sound recording and reproducing apparatus. **17**: 162—1945
Signal recording and reproducing method. **17**: 310—1946
Sound recording and reproducing system. **17**: 96—1945; 370—1946
Sound recording apparatus. **17**: 310—1946
Sound recording method and apparatus. **17**: 97—1945
Sound silencer for projectors. **17**: 310—1946
Stylus. **17**: 370—1946
Tone arm. **17**: 162—1945
Transducer. **17**: 163—1945
Translating device. **17**: 369—1946
Vibration-translating device. **17**: 311—1946

5.17 Telephone. Telephone Receivers

ABSTRACTS

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PATENTS

Electromagnetic device. **17**: 371—1946
Telephone unit. **17**: 164—1945

5.21 Vibration Devices (see also 5.9)

PATENTS

Crankshaft for internal combustion engines. **17**: 166—1945
Device adapted to eliminate oscillations. **17**: 164—1945
Device for balancing reciprocating engines. **17**: 164—1945
Flexible engine mount. **17**: 165—1945
Oscillation reducing device. **17**: 312—1946
Polyharmonic self-tuning damper means. **17**: 372—1946
Shaft vibration pick-up. **17**: 164—1945
Vibration damper. **17**: 164—1945; 311, 372—1946
Vibration damper for suspended wires and cables. **17**: 165—1945
Vibration damping suspension. **17**: 165—1945
Vibration indicator. **17**: 164—1945

6. Musical Instruments and Musics

6.1 General, Unclassified

PAPERS

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PATENT

Harmonica. **17**: 312—1946

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International congress of musicology. **17**: 89—1945

6.2 Bells, Xylophones. Other Instruments Having Rigid Vibrators

PAPER

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6.3 Brass Wind Instruments (lip vibrated)

PAPER

Dependence of tuning of wind instruments on temperature. Robert W. Young. **17**: 187—1946

PATENTS

Mouthpiece for cornets. **17**: 166—1945
Wind instrument. **17**: 166—1945

6.6 Pianos and other Keyboard Stringed Instruments

PATENTS

Piano. **17**: 97—1945; 312—1946
Piano action. **17**: 166—1945
Piano construction. **17**: 372—1946
Vertical piano action. **17**: 372—1946

6.7 Violin Family. Stringed Instruments except Keyboard Type

PAPER
Mechanical action of instruments of the violin family F. A. Saunders. 17: 169—1946
PATENTS
Attachment for musical string instruments. 17: 312—1946
Design for a violin. 17: 166—1945
Design for a violin or similar article. 17: 98—1945
Mute for stringed musical instruments. 17: 373, 373—1946
Stringed instrument. 17: 98—1945
Stringed instrument mute. 17: 373—1946
Stringed musical instrument. 17: 98—1945
Tone post for violins and similar musical instruments. 17: 167—1945

6.8 Wood Winds
PAPER
Dependence of tuning of wind instruments on temperature. Robert W. Young. 17: 187—1946
PATENTS
Clarinet attachment. 17: 373—1946
Design for a flageolet. 17: 98—1945
Design for a flute. 17: 98—1945
Double reed. 17: 167—1945
High note producing system in saxaphones. 17: 312—1946
Mouthpiece for reed instruments. 17: 99—1945
Reed. 17: 167—1945
Reed for musical instruments. 17: 373—1946

6.9 Electrical Musical Instruments
PATENTS
Apparatus for generating sound waves. 17: 374—1946
Electrical multiple instrument system. 17: 374—1946
Electrical musical apparatus. 17: 374—1946
Electrical pick-up for wind instruments. 17: 313—1946
Musical instrument. 17: 99—1945

6.10 Reed Organs. Accordians. Harmonicas
PATENTS
Chromatic harmonica. 17: 375—1946
Piano accordian. 17: 375—1946

7. Noise

7.1 General, Unclassified (see also 5.15)
PAPER
Demountable soundproof rooms. W. S. Gorton. 17: 236—1946

7.6 Noise in Buildings (see also 2.2)
PAPER
Demountable soundproof rooms. W. S. Gorton. 17: 236—1946

7.7 Machinery Noise
PATENTS
Air cleaner and silencer assembly. 17: 376—1946
Muffler. 17: 375—1946
Vacuum exhaust muffler. 17: 375—1946
Water silencer. 17: 375—1946

9. Speech and Singing

9.3 Articulation Testing. Articulation *versus* Loudness, Frequency, Frequency Range, Noise, Distortion, and Reverberation
ABSTRACTS
Factors governing the intelligibility of speech sounds. N. R. French and J. C. Steinberg. 17: 103—1945
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9.6 Instruments Relating to Speech and Singing
PATENT
Apparatus for intensifying speech in the human vocal cavities. 17: 313—1946

10. Supersonics (Ultrasonics)

10.1 General, Unclassified
PAPERS
New aspect of ultrasonics. B. K. Sahay. 17: 285—1946
Supersonic insects. W. H. Pielemeier. 17: 337—1946
Wave-front determination in a unidirectional supersonic beam. L. W. Labaw. 17: 19—1945
PATENT
Method of determining the characteristics of piezoelectric crystals. 17: 376—1946

10.2 Light Affected by Supersonic Waves
PATENT
Ultrasonic cell. 17: 167—1945

10.3 Supersonic Instruments
PAPERS
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Supersonic reflectoscope, an instrument for inspecting the interior of solid parts by means of sound waves. Floyd A. Firestone. 17: 287—1946
PATENT
Method and apparatus for ultrasonic testing. 17: 376—1946

10.4 Gases, Supersonic Velocities, Dispersion, and Absorption (see also 11.3)
PAPERS
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Wave-front determination in a unidirectional supersonic beam. L. W. Labaw. 17: 19—1945

10.5 Liquids, Supersonic Velocities, Dispersion, and Absorption
PAPER
Measurement of supersonic absorption in water by the balance method with mechanical integration. Eugene Tsung-Yueh Hsu. 17: 127—1945

10.6 Solids, Supersonic Velocities, Dispersion, and Absorption

PAPER

Supersonic reflectoscope, an instrument for inspecting the interior of solid parts by means of sound waves. Floyd A. Firestone. **17**: 287—1946

10.9 Biological Effects of Supersonic Waves

PAPER

Supersonic insects. W. H. Pielemeier. **17**: 337—1946

11. Waves and Vibrations

11.3 Propagation of Sound. Absorption during Propagation. Velocity of Sound (see also 10.4)

PAPERS

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Transmission, reflection, and guiding of an exponential pulse by a steel plate in water. I. Theory. M. F. M. Osborne and S. D. Hart. **17**: 1—1945

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11.4 Radiation from Vibrating Objects. Acoustical Impedance. Mechanical Impedance (see also 5.3)

PAPERS

Acoustic intensity distribution from a "piston" source. A. O. Williams, Jr. **17**: 219—1946

Application of the wave theory of room acoustics to the measurement of acoustic impedance. Cyril M. Harris. **17**: 35—1945

Conical sound source. Piero Giorgio Bordoni. **17**: 123—1945

Erratum: addendum on conical sound source. Piero Georgio Bordoni. **17**: 338—1946

Driving-point impedance of an infinite solid plate. R. Clark Jones. **17**: 334—1946

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Generalized plane wave horn theory. Vincent Salmon. **17**: 199—1946

New family of horns. Vincent Salmon. **17**: 212—1946

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11.5 Sounds of Finite Amplitude. Distortion

ABSTRACT

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SUBTITLE

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11.6 Sound in Tubes

PAPERS

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Analysis of plane discontinuities in cylindrical tubes. Part II. John W. Miles. **17**: 272—1946

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11.7 Theory of Waves and Vibrating Systems (see also 5.4)

PAPERS

Absorption and scattering by sound absorbent cylinders. Richard K. Cook and Peter Chrzanowski. **17**: 315—1946

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